WebCident: Streamlined Incident Reporting for the Indian Health Service

Gary Carter, MPH, RS, Resident Institutional Environmental Health Officer, IHS Headquarters, Rockville, Maryland; Darren Buchanan, BS, Environmental Health Data Systems Manager, IHS Headquarters, Rockville, Maryland; John Smart, MPH, REHS, Director, Division of Occupational Health and Safety Management, Navajo Area IHS, Window Rock, Arizona; Richard Turner REHS, MPH, Industrial Hygienist, Oklahoma Area Office, Oklahoma City, Oklahoma; and Katy Ciacco-Palatianos MD, MPH, Risk Management Consultant, IHS Headquarters, Rockville, MD

An important new tool for saving time and money is on the horizon, and it's called WebCident. To be implemented in January 2003 in all Indian Health Service (IHS) facilities, WebCident is a computer program designed to save time and money when it comes to documenting and tracking incidents. The term "incident" refers to workplace injuries and illnesses, blood borne pathogen exposures, and other events involving safety and security. WebCident helps safety officers and facility directors better understand where injuries and illnesses are occurring, and why. A database management tool designed by IHS Environmental Health Officers, WebCident allows IHS workers and supervisors to document incidents and automatically create reports right from their own workstation.

Why is such a tool important? Primarily, because Federal law requires that incidents are reported and recorded, and this is exactly what WebCident does. When President Richard M. Nixon signed the Occupational Safety and Health Act in 1970, he created the most important piece of worker safety legislation ever enacted. Among its many directives, this law mandated the recording and reporting of worker injuries by employers. The Federal requirement stipulates that information is collected and analyzed to determine how to prevent injuries, illnesses, and deaths in the workplace.

Currently, the IHS fulfills these requirements by using the Incident Report form (IHS-516), with which many may be familiar. IHS-516 is the form we fill out when we get injured on the job, or something is stolen from our office, or we get a needle stick. It usually takes valuable time out of our day to locate the form, fill it out, and send it over to the safety officer, where we often lose track of it. With WebCident, much of that inefficient use of time and energy will come to an end.

Consider the scenario in Figure 1. We can see that the nurse and the safety officer have had to take significant time away from their regular duties to document the needle stick injury. The information, however, never became part of a database where trends and causes of needle stick injuries could be analyzed. The scenario demonstrates that the "old" system does not capture the essential details of an incident and add them to a data set for future analysis. The inability of the current, paper-based system to make the most of the latest technology has clearly made it obsolete and inefficient.

Figure 1. Needle stick scenario

> You are a nurse who is nearing the end of a very hectic 12-hour shift when suddenly you are stuck with a contaminated needle. According to IHS policy, you must report this incident to your supervisor and the safety officer. Since you will be taking a weekend trip to your favorite beach leaving on the first flight out in the morning, you begin working on the form right away. About an hour and a half later, you have managed to locate and complete the form, and send it to the safety officer. The next day, when the safety officer reviews the form, she sees that this incident was a blood borne pathogen exposure requiring additional information not included on the completed form. She sends you another form for entering information specific to needle sticks, such as the type and brand of syringe involved, but you don't receive the form until your return from the beach on Monday. By then you remember very little detail of what happened before you left, and only vaguely remember the needle stick injury at all.

Because of incomplete reporting and potential for mistakes when filling out the current form, the number and types of injuries occurring in and around IHS facilities cannot be easily determined. One actual event provides a powerful illustration of this point. Each year the IHS sends an annual report to the Department of Health and Human Services that describes all work-related injuries and illnesses that have occurred throughout the Agency. In one notable instance, however, the work-related death of an IHS worker was left out of the report because the system failed to relay information about the fatal incident through the proper channels. The incident was not discovered until after the report had been submitted. A system that fails to report the most serious category of incident undoubtedly needs to be revised or replaced with a better one.

Other problems plague the existing IHS incident reporting system. It is not designed to collect OSHA-required blood borne pathogen information or information on ergonomic related injuries. The earlier needle stick scenario provides an example of this, where three separate reports were filled out by hand: the incident report summary, the blood borne pathogen incident summary, and the sharps injury log. Further, the cur-

rent system does not have WebCident's built-in electronic data system that makes it easy to evaluate and analyze the details surrounding reportable incidents. As a result, thousands of hours are spent every year completing forms that do not add to a data set used for devising injury prevention strategies.

WebCident eliminates the weaknesses of the current incident reporting system. It combines all IHS incidents into a comprehensive and confidential data set, and is accessible through the IHS Intranet by anyone who may need to document an incident, namely, all employees and supervisors. The information goes directly into the central database, which is maintained at IHS headquarters. Safety officers can then retrieve all the details for incidents at their facilities, enabling them to determine which incidents occur the most frequently, and why. Therefore, WebCident's most valuable feature is its use as a tool to assist in preventing illnesses, injuries, and deaths within the IHS.

WebCident's value is further enhanced by recent emphasis on patient safety by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), which now requires documentation and analysis of patient injuries. Awareness of patient safety increased after a report was released in 2001 by the Institute of Medicine (IOM) revealing that an alarming percentage of patients experience adverse events while in the hospital. Following the tenet of the Hippocratic oath, "Above all, do no harm," the concept of patient safety seeks to identify and eliminate hazardous circumstances *before* a patient is injured. Analyzing circumstances of an injury to determine its cause is called "root cause analysis," now required by JCAHO. WebCident is a database management tool that collects information on patient injuries so that, along with fulfilling reporting requirements, permits the performance of root cause analyses, as well.

WebCident is simple to use, and was designed with the "computer-challenged" in mind. Among its many features are the following:

- Reports are automatically generated, including the summarized incident report, OSHA 300 log, OSHA 300 summary, sharps injury log, patient and visitor injury summaries, annual summaries of lost work time events, and several others.
- Every form is user friendly, with pull-down menus and a "check selection" format.
- For people who do not have access to a computer, the reporting form can be printed and filled out manually.
- WebCident follows "logic pathways," meaning that only those issues relevant to your incident are completed. You won't be wading through unnecessary sections while completing an incident report.
- Computer program installation is not necessary. WebCident is a computer application that is available to all computers on the IHS Intranet, so typing in the web address is all that is required for access.
- User names and passwords are not required for accessing WebCident. Once the WebCident home page appears, you are ready to begin entering information. Safety officers, however, will have access to a password-protected area, where they can access all the reports from their facilities.
- WebCident works with most Internet browsers, including older ones, and works great with slow connections.
- It takes about 15 minutes to complete a typical incident report using WebCident.

The target date for having all IHS facilities switch to WebCident is January 1, 2003. Currently, a team has been assembled to find the best way to introduce WebCident into all IHS facilities. The team will appeal to nurses, physicians, administrators, safety officers, and other employees for their support in the transition from the outdated system to the state-of-the-art WebCident system. We expect such a transition to be simple and straightforward.

Consider the needle stick scenario once again, but instead of using the old incident reporting form, your facility is using WebCident. You sit down at your workstation, type in the web address of WebCident, and begin filling in the details of the needle stick injury. Guided step-by-step by the user-friendly program, you complete the incident report in less than fifteen minutes. You print one copy of the incident summary for your records and one for your supervisor. Then it's off to the beach! The safety officer receives an automatic e-mail notice of the incident and immediately reviews it. He or she then prints a copy of the report summary, along with copies of the blood borne pathogen incident summary and sharps injury log for his or her own records. You spend little time completing the form, information is accurate, and the safety officer is provided with key information needed for preventing needle stick injuries in the future.

For additional information, or to make suggestions, please contact Gary Carter at (301) 443-1054, or via e-mail at gcarter@hqe.ihs.gov.